

# PATENT COOPERATION TREATY

## PCT

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### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)


Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP 03/11063	International filing date (day/month/year) 25.09.2003	Priority date (day/month/year) 21.10.2002
International Patent Classification (IPC) or both national classification and IPC B65D41/48		
Applicant UNILEVER N.V.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
  - ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  19.03.2004	Date of completion of this report  22.02.2005
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Fournier, J  Telephone No. +31 70 340-1031



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/EP 03/11063**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-12 as originally filed

**Claims, Numbers**

1-15 received on 22.11.2004 with letter of 19.11.2004

**Drawings, Sheets**

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-15
	No: Claims	
Inventive step (IS)	Yes: Claims	1-15
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-15
	No: Claims	

2. Citations and explanations

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/EP 03/11063

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Claim 1:

**Nearest prior art: D1:US-B1-6 260 723**

Document D1 discloses a plastic container suitable for aseptic packaging of microbiologically sensitive food products. It comprises an injection blowmoulded container body and neck. The container is closed by a snap-on closure .

Document D1, which is considered to represent the most relevant state of the art, discloses a container from which the subject-matter of claim 1 differs in that the snap-on closure comprises a peripheral skirt with a ridge, intended for engagement with the inner surface of the neck wherein the free outer diameter of the ridge is slightly higher than the free inner diameter of the neck, the snap-on closure and the neck comprising means for substantially fixing the ridge in the axial direction of the neck when the container is closed.

The subject-matter of claim 1 is therefore **new** (Article 33(2) PCT).

The **problem to be solved** by the present invention may therefore be regarded as providing a container in which the sealing surface is protected against damage. This sealing surface includes the edge of the neck of the container and the annular lip of the closure.

The solution to this problem proposed in claim 1 of the present application is **considered as involving an inventive step** (Article 33(3) PCT) for the following reasons: This problem is not mentioned in the available prior art. Moreover, part of this solution is disclosed in document D2, FR-A-2 744 100, but the objet of D2 is to avoid undesired opening of the container if the cap is pushed out by an axial force.

Claims 2-14 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Claim 15 relates to the use of a plastic container according to any of claims 1-14 and meets the requirements of the PCT with respect to novelty and inventive step.

**Claims**

1. Plastic container suitable for aseptic packaging of microbiologically sensitive food products comprising an injection blowmoulded container body (1) and neck (2) and a closure (3), wherein the closure (3) is a snap-on closure (3), characterized in that the snap-on closure (3) comprises a peripheral skirt (4) with a ridge (5), intended for engagement with the inner surface (6) of the neck (2) wherein the free outer diameter of the ridge (5) is slightly higher than the free inner diameter of the neck, characterised in that the snap-on closure (3) and the neck comprise means (7,8) for substantially fixing the ridge (5) in the axial direction of the neck, when the container is closed.
2. Container according to claim 1, wherein the tolerance of movement of the ridge (5) in the axial direction of the neck, when the container is closed, is smaller than the height of the contact surface between the ridge and the inner surface of the neck.
3. Container according to claim 1 or 2, wherein the neck has an inner surface (6), having no grooves having a width of 0.5  $\mu\text{m}$  or larger.
4. Container according to any of claims 1-3, wherein the Shore D hardness of the material of the ridge (5) is lower than the Shore D hardness of the material of the neck (2).
5. Container according to claim 4, wherein the Shore D hardness of the material of the ridge (5) is 65 or smaller and the Shore D hardness of the material of the neck (2) is 70 or higher.

**REPLACED BY  
ART 34 AMDT**

6. Container according to any of claims 1-5, wherein the container is provided with a foil around the bottle covering large part of the body and the neck of the bottle, but not the cap.
7. Container according to claim 6, wherein the foil comprises oriented polystyrene.
8. Container according to any of claims 1-7, wherein the snap-on closure has a hinge (9).
9. Container according to claim 8, wherein the hinge (9) is a click-hinge (9).
10. Container according to any of claims 1-9, wherein the snap-on closure comprises a circumferential tear-off strip (10).
11. Container according to any of claims 1-10, wherein the material of the ridge substantially consists of linear low-density polyethylene (LLDPE).
12. Container according to any of claims 1-11, wherein the container is a bottle.
13. Container according to any of claims 1-13 filled with a sterilised or pasteurised microbiologically sensitive food product.
14. Container according to claim 14, wherein the microbiologically sensitive food product has a pH between 6 and 8.

REPLACED BY  
ART 34 AMDT

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15. Plastic container comprising an injection blowmoulded container body (1) and neck (2) and a closure (3), wherein the closure (3) is a snap-on closure (3), filled with a sterilised or pasteurised microbiologically sensitive food product having a pH between 6 and 8.

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ART 34 AMDT

## INTERNATIONAL SEARCH REPORT

International Application No

PCT 03/11063

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 B65D41/48

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65B B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 260 723 B1 (BERGHOLTZ LARS) 17 July 2001 (2001-07-17) the whole document	1-3,6-14
Y	FR 2 744 100 A (ASTRA PLASTIQUE) 1 August 1997 (1997-08-01) cited in the application the whole document	1-3,6-14
A	FR 2 820 110 A (VALOIS SA) 2 August 2002 (2002-08-02) claim 4; figures	1
A	FR 2 294 936 A (BEHRINGWERKE AG) 16 July 1976 (1976-07-16) cited in the application figures	1
	-/-	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

9 February 2004

Date of mailing of the international search report

17/02/2004

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## INTERNATIONAL SEARCH REPORT

International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 699 301 A (BLAKE WILLIAM S) 13 October 1987 (1987-10-13) column 2, line 9 - line 13 column 4, line 21 - line 25; figures -----	15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT 03/11063

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6260723	B1	17-07-2001	DE 19645263 A1	07-05-1998
			AU 4780197 A	29-05-1998
			WO 9819930 A1	14-05-1998
			EP 0936997 A1	25-08-1999
			JP 2001503356 T	13-03-2001
FR 2744100	A	01-08-1997	FR 2744100 A1	01-08-1997
FR 2820110	A	02-08-2002	FR 2820110 A1	02-08-2002
			EP 1355825 A1	29-10-2003
			WO 02060760 A1	08-08-2002
FR 2294936	A	16-07-1976	BE 836688 A1	16-06-1976
			CH 595255 A5	15-02-1978
			DK 569075 A	17-06-1976
			FI 753494 A	17-06-1976
			FR 2294936 A1	16-07-1976
			IT 1050077 B	10-03-1981
			LU 74021 A1	11-11-1976
			NL 7514451 A	18-06-1976
US 4699301	A	13-10-1987	NONE	